U.S.-Russian Nuclear Arms Control: Crisis and Collapse or Crossroads?

Workshop Summary

August 2018



LAWRENCE LIVERMORE NATIONAL LABORATORY

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U.S.-Russian Nuclear Arms Control: Crisis and Collapse or Crossroads?

Center for Global Security Research Lawrence Livermore National Laboratory

July 17-18, 2018

Lesley Kucharski, Rafael Loss, Andrew Reddie

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Key Questions:

- 1. Is there an opportunity to renew the bilateral arms control framework in a manner acceptable to both sides and supporting mutually beneficial objectives? If not at present, can one be created? How?
- 2. What, if anything, does President Putin want out of a re-constructed arms control approach?
- 3. What new agreements or processes would serve the interests of the United States and its allies and partners?
- 4. What might be the benefits and risks of a new U.S. proposal for a follow-on to New START?

Context:

On July 17-18, 2018, the Center for Global Security Research at Lawrence Livermore National Laboratory hosted several dozen experts on arms control and U.S.-Russian relations to explore pathways for future arms control agreements between the two countries. With the Helsinki Summit between Presidents Trump and Putin held the day prior, the workshop proved to be especially timely. Speaking at the summit about the future of New START, President Putin declared: "Russia stands ready to extend this treaty, to prolong it, but we have to agree on the specifics first." While President Trump made no similar statement, the 2018 Nuclear Posture Review (NPR) serves as the point of departure for understanding the U.S. position on the future of strategic arms control with Russia. According to the NPR, arms control should codify "mutually agreed-upon nuclear postures in a verifiable and enforceable manner" to help manage strategic competition and sustain strategic stability. It also recognizes that arms control "can foster transparency, understanding, and predictability in adversary relations, thereby reducing the risk of misunderstanding and miscalculation." However, the NPR is also frank about persisting challenges to the arms control regime, most notably continued Russian noncompliance with the Intermediate-Range Nuclear Forces (INF) Treaty.

In this context, the first day of the workshop was dedicated to assessing the incentives and disincentives the United States and Russia face in pursuing further arms control agreements as well as the role of arms control in the two countries' foreign policies and security strategies. On the second day, the workshop participants explored four pathways for a renewal of U.S.-Russian arms control, including: New START extension or a New START follow-on agreement; an agreement which meets Russia at least half way in the strategic space; an agreement addressing challenges to European nuclear stability; and unusual mix-and-match approaches that might be taken. The discussions and their results are summarized here.

Panel 1: President Putin's Arms Control Agenda

- What role does arms control play in Russian foreign policy and security strategy?
- What criticisms have been directed against the existing arms control framework?
- What claims have been made about preferred alternative future approaches?
- Is military modernization, including the nuclear portion, proceeding for its own sake or is it also plausibly in part about building bargaining chips?

The workshop began with a discussion of the role of arms control in Russian foreign policy and security strategy. From the outset, workshop participants agreed that President Putin has a deep understanding of Russian nuclear forces and that his perception of arms control has not evolved over time since he first became president. The participants argued that Putin views arms control through the lens of both security policy (external as well as internal) and foreign policy at a ratio of 75:25. In this regard, several themes in support of arms control were identified. First, Putin recognizes that arms control can be a useful tool for resolving geopolitical issues when Russia is experiencing economic difficulties. Second, arms control provides a method that allows President Putin to challenge what he perceives as U.S. unilateralism in military and foreign policy as it constrains U.S. nuclear weapons modernization and enhances predictability in nuclear force posture estimates through transparency, monitoring, and verification measures. Third, arms control is perceived by President Putin as a process that enhances his prestige amongst the international community of states as well as his domestic audience. The dialogue process itself is valuable in so far as it conveys to the world that Russia is a peer of the United States. A fourth and related theme is that arms control with the U.S. plays an important role in preserving and strengthening the nuclear nonproliferation regime under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), particularly in light of the opening for signature of the Treaty on the Prohibition of Nuclear Weapons (TPNW).

While agreeing that arms control can be a useful tool in Russia's security and foreign policy toolkit, workshop participants also discussed criticisms Russia has directed against the existing arms control framework. Some in the Russian security establishment experience "buyer's remorse" from sacrificing Russian security interests for political benefit through arms control. At the core of this criticism lies a perception that U.S. unilateralism transcends the current arms control framework. Participants agreed that President Putin interprets the history of the current arms control framework as part of a greater U.S. strategy aimed at constraining and gaining advantages over Russia. Central themes of this narrative include lies, disrespect, and power. U.S. withdrawal from the Treaty on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty)

and its subsequent missile defense developments are highlighted as prominent illustrations of U.S. deceit. Regarding disrespect, the INF Treaty is interpreted by some Russian strategic thinkers as a one-sided agreement through which the U.S. took advantage of weaknesses in the Soviet leadership. U.S. refusal to incorporate what Russia perceives as the most destabilizing systems into arms control agreements was emphasized as an example of the U.S. seeking power over Russia. As a result, Russian arms control negotiation and public communications strategies are dominated by the "treasuring of grievances" and "stonewall" techniques which seek to position Russia as a responsible power in contrast to the United States. The participants emphasized that U.S. missile defenses are perceived as an accelerant of U.S. unilateralism.

In a discussion of alternative future approaches, it was concluded that Russia does not appear to have a plan beyond New START extension. It was noted that Russia has historically been reluctant to present arms control proposals and that its proposals are heavily conditioned and reflect non-negotiable hardline positions. For example, Russia demands legally-binding arrangements despite U.S. domestic political constraints and pursues a holistic and comprehensive approach by linking all issues—offensive and defensive, strategic and non-strategic, as well as cross-domain—rather than focusing on specific issues on a step-by-step basis. These positions are rooted in Russian strategic culture, which is characterized by a high level of patience and secrecy, and the organizational structure of the Russian arms control negotiation process – specifically the hierarchical nature of the process and the disproportionate influence of the Ministry of Defense over the Ministry of Foreign Affairs. Given these historical and organizational observations, the workshop participants argued that Russia is unable to "think big" towards an alternative future arms control approach.

Participants also argued that Russia may be unwilling, and perhaps afraid, to "think big" about new forms of legally-binding restraint and will therefore build new weapons systems instead. From the military perspective, the risks of making the wrong decision about an alternative arms control approach may be seen as too high. In this context, a multitude of issues were discussed, including: the level of Russia's conventional forces vis-à-vis the U.S. and its allies; a lack of economic power which will continue to prevent Russia from achieving and maintaining parity with the U.S. outside of nuclear forces; the lack of success in efforts to multilateralize the current arms control regime; an overexaggerated yet sincere concern about U.S. technological capability, particularly regarding ballistic missile defense; and a lack of trust between Russia and the U.S. which is exacerbated by the current political climate and the absence of improvements in arms control verification technologies. From the political perspective, the risks may also be prohibitively high. It was noted that President Putin may suffer domestically if he attempts and fails to deliver on a new arms control proposal. Against this backdrop, building new weapons systems provides a more tangible and permanent sense of security than arms control.

The plausibility that Russian modernization is proceeding in part to build bargaining chips for future arms control negotiations was debated. It was agreed that Russia negotiates only from a position of strength. From the outside, however, it is difficult to distinguish between a Russia that feels strong rather than weak. This challenge is exacerbated by an uncertainty amongst the Russian leadership about how they perceive their own strength.

The possibility was raised that Russia seeks to exploit perceived weaknesses in U.S. strategic culture and "wait out the U.S." until it presents an arms control proposal amenable to Russian interests. These "weaknesses" include:

- Impatience and a desire to "get things done";
- Transparency and frankness about internal politics and divisions;
- U.S. compliance with bilateral arms control arrangements despite Russian noncompliance; and
- Divisions within U.S. alliances, particularly in Europe given the rise in popularity of Russia amongst certain demographics as well as the domestic pressures generated by the movement supporting the TPNW.

Panel 2: Possible Russian Incentives for Arms Control Renewal

- What problems in the bilateral strategic military relationship might Russian leaders wish to address with arms control tools?
- How much value does Russian leadership attach to continued nuclear transparency by the United States and verification of U.S. limitations?
- How much value does Russian leadership attach to continued constraints on U.S. upload potential?
- What other developments in the U.S. strategic military toolkit do Russian leaders wish to constrain?
- Do they perceive significant emerging crisis instabilities in the new warfighting domains and might they be receptive to some joint approach to norms and/or restraint?
- How does Russia perceive its leverage over the U.S. in arms control talks? Improving with time?

This panel began from the premise that Russia has reached a point where it is no longer finds value in further decreasing its arsenal of strategic nuclear weapons along the lines of the current arms control approach. Participants opined that Russia may believe that its asymmetric countermeasures against the U.S. balance the correlation of forces and obviate the need for traditional arms control. Although Russia may not have a plan for a future arms control approach, the participants discussed possible security incentives in the bilateral strategic military relationship that Russian leaders might wish to address with arms control tools.

One incentive is to preserve the inspection regime provided by the current bilateral arms control framework. While participants noted that Russia knows more about U.S. nuclear forces due to U.S. transparency than the United States knows about Russian nuclear forces, they assessed that the loss of inspections will reduce predictability in the long run. For example, it may lead Russia to believe that the United States is uploading to its full capacity and would leave Russia without a mechanism for assessing the return capability, i.e., irreversible conversion, of U.S. nuclear forces. These two concerns were addressed but not resolved by New START, since an imbalance in launchers that favors the United States remains and Russia seeks rough parity with the United States in terms of upload potential. Russian concerns related to transparency and monitoring will increase in importance as the United States begins its modernization cycle and pursues the development of the new weapon systems called for in the 2018 NPR.

It was also emphasized that intelligence collection alone is not enough of an incentive for Russia to pursue arms control with the United States. Arms control that encompasses a broader perspective of the military balance beyond its nuclear aspect was identified as a second incentive. Future agreements, for example, could address Russian concerns surrounding U.S. developments in long-range unmanned aerial vehicles (UAVs) as well as long-range standoff weapons under the Prompt Global Strike program. It could also involve concrete ceilings on temporary deployments and a permanent solution to flanks in the context of conventional arms control on the European continent. Participants emphasized that for Russia today, more so than they were during the Cold War, the conventional and nuclear military balance are fused. A reconstructed nuclear arms control approach therefore must also address the conventional military balance.

A third incentive would link offensive and defensive systems in response to Russian concerns about U.S. ballistic missile defense deployments. It was noted that the younger generations of Russian strategic thinkers are particularly concerned with this issue as it relates to crisis stability.

A fourth incentive would address emerging crisis instabilities in new warfighting domains. This could involve an agreement on precision-guided munitions and/or early-warning systems tied to space-based military and civilian assets. Since both Russia and the U.S. are becoming increasingly dependent upon space-based systems, Russia may be open to addressing the mutual and growing vulnerabilities in this domain through arms control. "Color revolutions" and cyberspace are other new warfighting domains that concern Russia; however, Russia has not figured out whether and how security issues in these domains can be addressed through arms control. Participants noted that Russia will likely continue to exploit perceived U.S. vulnerabilities in space and cyberspace, so its interest in applying arms control tools to these domains may be and remain low for the foreseeable future.

The workshop participants expressed the belief that Russia views its leverage over the U.S. in arms control talks as improving with time. This increase is due in part to the timing of the Russian nuclear modernization cycle which is more than halfway complete, whereas the U.S. cycle is just beginning. That said, economic hardship has negatively impacted Russian modernization, thereby generating interest in constraining U.S. modernization. Another factor contributing to Russian leverage is the precedence of the Russian arms control narrative in the absence of a counter-narrative from the United States. For example, the U.S. decision to withdraw from a series of international agreements contributes to a Russian narrative concerning U.S. unilateralism and gives credence to its insistence on legally-binding approaches to arms control. The two Russian proposals to extend New START grant further political leverage over the United States, which has not made similar proposals.

Panel 3: Nuclear Arms Control in the Context of U.S. Competitive Strategies

- How has the Trump administration defined U.S. strategy for long-term strategic military competition with Russia?
- How has it thought about the challenges and opportunities of arms racing with Russia?
- What is its theory of success in long-term competitions? How might arms control fit into that theory?

Regarding U.S. competitive strategies and long-term strategic competition with Russia (and China), the workshop highlighted the critical contributions the 2017 National Security Strategy, 2018 Nuclear Posture Review, and subsequent policy adjustments have made to bolstering deterrence and competitiveness. These documents were viewed in the context of U.S.-Soviet strategic competition during the Cold War, with explicit reference to Andrew Marshall's pioneering 1972 report, in which he proposed to "steer the competition in ways that reduce the efficiency with which Soviet resources are used, or to steer the competition into areas of U.S. comparative advantage." It is important that U.S. strategies provoke Russian investment in capabilities which do not significantly alter the strategic balance.

These recent U.S. strategy documents outline how the tools of statecraft will be leveraged to counter renewed Russian assertiveness (e.g., in Georgia, Ukraine, and Syria), force modernization efforts, and extensive military exercises which incorporate tactical nuclear dimensions. Some of the competitive measures intended to complicate the adversary's force planning and development include: the Countering America's Adversaries Through Sanctions Act; bolstering European deterrence; developing low-yield sea-launched ballistic missile (SLBM) and sea-launched cruise missile (SLCM) capabilities; and utilizing the Trump administration's revised conventional arms transfer policy. However, it was cautioned that, to-date, although the documents emphasize the return of great power competition, a shift in mindset and practice has yet to fully materialize. The nuclear realm was widely viewed as not the most suitable for long-term competition with Russia; competition in the conventional sphere would better play to U.S. strengths and advantages. On a more fundamental level, participants challenged the appropriateness of the competitive strategies framework on the grounds that it lacks a definition of the preferred end-state, such as the defeat of the Soviet-Communist system during the Cold War.

Contrasting this view is an approach that considers bilateral arms control not solely through the lens of competitive strategies and unilateral advantages, but rather as a means to enhance overall security. A competitive strategies approach with the corresponding rhetoric of great power competition, domination, and preeminence might not be a useful framework for productive arms control negotiations. Although the United States would likely be able to outspend Russia in an arms race, workshop participants questioned whether the political conditions exist for public support of such expenditures. Nevertheless, there might be an opportunity to exploit Russian

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¹ Andy W. Marshall (1972), "Long-Term Competition with the Soviets: A Framework for Strategic Analysis," RAND Corporation: https://www.rand.org/pubs/reports/R862.html, p. 51.

overconfidence in U.S. technological capabilities in the non-nuclear realm. The goal, however, should be to avoid active nuclear competition and advance stability while maintaining a credible deterrent. A follow-on agreement to New START could facilitate stability through limits on production capacities or non-strategic nuclear weapons. Alternatively, it could lead to further reductions in strategic nuclear arsenals. In this regard, participants emphasized that maintaining strategic stability should be the lens through which to view reductions.

Ultimately, arms control should reduce the likelihood of war, its costs, and consequences. The 21st century security environment might require a different set of goals and approaches to arms control. The Trump administration does not seem to view arms control as a suitable tool for dealing with revisionist powers that disregard and violate existing treaties and norms. Instead, it emphasizes military force and posture to promote stability at the strategic level and as a tool to reestablish the right conditions for arms control with Russia.

Panel 4: Possible U.S. Incentives for Arms Control Renewal

- What problems in the bilateral strategic military relationship might U.S. leaders wish to address with arms control tools?
- How much value does the U.S. attach to continued transparency and verification?
- How important are continued constraints on Russian upload potential?
- What other developments in the Russian toolkit might we wish to constrain?
- How important are the new generators of crisis instability and are they receptive to arms control approaches?
- To what extent are U.S. arms control preferences limited by the constraints of technology?
- Is U.S. negotiating leverage rising or falling?

The workshop participants agreed that the United States should aim to shape its security environment through arms control. The combined effects of treaty-based arms control and the end of the Cold War, for instance, shaped the environment and risk calculations, and thereby considerably improved U.S.-Russian strategic stability. Consequently, stability does not mean no change in the system; rather, it means that parties are able, through arms control, to flexibly respond to changing circumstances and prevent inadvertent arms racing and conflict escalation. This implies an understanding of arms control as a continuous process of enhancing trust and predictability in which diplomacy plays a critical role. Disagreement, to some degree, persisted over whether arms control today should be pursued for strategic competition or to enhance strategic stability and overall security. Either way, limitations on Russian nuclear forces, transparency, and effective verification mechanisms were considered as benefits for the United States.

Regardless of the ultimate purpose of U.S. arms control efforts, Washington should try to address several emerging technologies and new generators of crisis instability. These include hypersonic boost-glide weapon systems, cyber and space capabilities (and, relatedly, a lack of agreement about the borders between legitimate cyber espionage and other illegitimate activities), and the dangers of catalytic nuclear war and nuclear escalation. Additionally, Russia

has considered new nuclear employment scenarios (particularly in regional contexts and under the assumption that nuclear wars could remain limited and consequently be won), shirked its responsibilities under existing arms control treaties and applied hybrid and asymmetric tactics as well as intimidation campaigns and nuclear saber rattling to achieve its objectives. Russia will likely continue along this path as long as it perceives gains from such measures. A U.S. response to these actions should be delivered through political channels rather than an arms control framework, in no small part because Senate ratification of a new treaty would be highly unlikely under current conditions.

A further complication is that Russia seems to require any future arms control agreement to be comprehensive and holistic, including conventional and nuclear, offensive and defensive capabilities across all domains. This is a significant departure from the START process in which the United States and the Soviet Union effectively disentangled the various areas of concern. Whether this was a product of a rare convergence of the right circumstances (both sides wanting to avoid another arms race) and the right people (experience from Strategic Arms Limitation Talks) remained unanswered but would benefit from further inquiry.

The United States should pursue arms control to maintain domestic support for its nuclear deterrent. Additionally, a reaffirmation of the U.S. commitment to arms control could mitigate the pressures for non-nuclear weapons states to join the TPNW. Pressures are particularly acute for States party to nuclear-weapon-free zones, since their primary motivation for sustaining their commitment to the NPT is the Article VI disarmament obligation. Several European NATO allies, too, are under considerable pressure to sign the TPNW, which could undermine NATO's nuclear deterrence policy and forces. Proactive arms control efforts could mitigate some concerns among Allied populations. A strong arms control pillar of the alliance, led by the United States, could also enable the other member states to more easily support additional measures to further bolster NATO's deterrence posture, should such measures become necessary. The perception of a renewed U.S.-Russian nuclear arms race could critically broaden support for the TPNW. Additionally, failing to reference the United States' disarmament obligations (under Article VI of the NPT) in the most recent NPR was considered by some participants as a mistake, albeit one consistent with the focus on strategic competition and the call for new nuclear capabilities (SLBM and SLCM).

Panel 5: Steady as She Goes on the START Pathway

- Is New START extension in the U.S. interest? Is it in Russia's interest?
- Which side has the stronger interest in New START extension?
- Are there any gaps in New START that can be exploited by Russia if the treaty is extended?
- Is an additional one-third reduction still desirable? Under what conditions?
- Is continuation but with mutually agreed lower cap on forces feasible? Desirable?

This panel examined the potential for continuing along the START pathway. At the outset, participants noted that three alternative futures exist for the New START framework: extension until 2026, a follow-on agreement potentially encompassing further reductions, or expiration

without a subsequent strategic arms control agreement in place. It was acknowledged that it remains unlikely that negotiations for a follow-on START will materialize given noncompliance issues associated with the INF Treaty and few signals of Russian willingness to revisit it. Indeed, this suggests that the current regime faces the question of *when* (2021 or 2026) rather than *if* it will end. Participants went on to note that even if the INF Russian non-compliance issue vanished, insurmountable obstacles remain to be overcome between now and 2021. These include Russian concerns about ballistic missile defense in Europe and conventional precision strike. However, participants also noted that an extension of New START was in the interest of both sides—but for varying reasons.

The United States requires a vision for cooperation to reduce nuclear risks in light of fears over Russian upload capacity (given its open production lines) and U.S. domestic politics and alliance commitments. Failure to extend New START would have domestic consequences—particularly during the period of modernization of nuclear forces. Indeed, the challenges associated with crafting new nuclear policy, including budgetary approval, may become more difficult without an arms control framework in place. Participants also noted that New START requires extension before the campaigns for the 2020 U.S. presidential election begin in earnest and make concerted negotiations near impossible. Moreover, the U.S. policy of "essential equivalence" and its associated force posture would have to be revisited should New START be discontinued—including the need to re-MIRV some ICBMs and add more SLBMs to the arsenal. A series of questions that U.S. policy-makers would need to address were formulated:

- Would the United States forego uploading if or until Russia goes above New START limits?
- Are policy-makers confident that we will be able to detect Russian uploading?
- Is there a danger that the United States would fail to minimize the gap with Russia?
- Does this impact U.S. ability to assure its allies of extended deterrence?

Participants noted that President Putin will likely seek New START extension, as signaled by a Russian Ministry of Defense statement declaring Russia ready to intensify contacts via the general staff and other channels and Putin's statement on the future of U.S.-Russian arms control following the Helsinki Summit. New START renewal, however, only applies to three types of capabilities: bombers, ICBMs, and SLBMs. New technologies, including undersea drones, intercontinental cruise missiles (ICCMs), and hypersonic boost-glide vehicles would not be covered and represent another source of unregulated strategic competition. These technologies will likely be stumbling blocks to future arms control talks in addition to missile defense and conventional strike capabilities.

While not the proximate concern, the end of the treaty-based arms control would have consequences for the international nonproliferation regime (particularly Russian and U.S. NPT Article VI commitments). While the two countries have made nuclear disarmament contingent upon fundamental changes in the security environment, and thereby treated their Article VI commitments as aspirational, the collapse of U.S.-Russian arms control and a renewed nuclear arms race would make it difficult to sustain the argument with the international community. While no policy undertaken by either side is likely to placate those non-nuclear weapons states that already support the TPNW, managing nuclear risks by uploading warheads is likely to be viewed in a negative light.

Further reductions were not fundamentally opposed; however, from the U.S. perspective, two concerns were raised. First, reductions would have to be reciprocal, since abandoning "second to none" might make credible extended deterrence and assurance more difficult. Second, reductions that might lead to renewed discussions concerning the viability and desirability of the nuclear triad should be avoided. Given the 2018 NPR, near-term reductions would be very challenging, and a further one-third reduction is unlikely to have a constituency. Instead, participants suggested that new methods for a verification and a transparency regime were a more appropriate goal than further reductions.

Would a world in which the United States committed itself to no more than 1000-1100 deployed strategic nuclear warheads be less stable? The participants noted that continued stability would depend on the targeting guidance stemming from the NPR, with input from the Joint Chiefs. Changing the guidance would require a change in strategy. Indeed, there is a need to consider any future reductions through the four roles for U.S. nuclear weapons outlined in the 2018 NPR—deterrence of nuclear and non-nuclear attack, assurance of allies and partners, achievement of U.S. objectives if deterrence fails, and capacity to hedge against an uncertain future—as well as the changing security environment with threats emanating from North Korea, Iran, potential conflict between Pakistan and India, and other sources.

If an opportunity for further reductions arises, one goal could be to decrease Russian upload and breakout capacities, which might include lower limits on non-deployed missiles. This would require a new agreement rather than extension or side agreement.

Panel 6: Meeting Russia at Least Half Way in the Strategic Space

- Is it possible to agree that offense and defense are more broadly linked than before?
- Are some limits on both offense (nuclear and non-nuclear?) and defense (both kinetic and non-kinetic?) plausible for the United States? Under what conditions, if any?
- How would a broader agreement be implemented?

A majority of the workshop participants concluded that the renewal of the existing bilateral arms control framework is in the interest of both the United States and Russia and supports mutually beneficial objectives, assuming that strategic stability remains the top priority.

For the near term, extending New START beyond 2021 would serve the interest of both the United States (as it undergoes nuclear modernization to meet the security needs of a treaty-based security environment) and Russia, given the asymmetry in upload capacity between both sides. Indeed, the dangers of misperception and miscalculation associated with the uncertainty of a world without the verification and transparency measures provided by the existing treaty-based framework was noted. The "pre-1974 consensus" that arms control represents an important strategic tool remains the case today. To that end, participants discussed the potential for New START extension without a resolution of INF and Conventional Armed Forces in Europe (CFE) Treaty issues, without side deals addressing Russian concerns regarding ballistic missile defense, and without building a framework for future arms control agreements beyond 2026.

Other issues to be raised in future agreements include Russian actions in Crimea and Ukraine, election interference, destabilizing weapon systems developments. The participants also mentioned U.S. missile defenses and GBIs (designed to counter threats from North Korea and Iran), plans to develop space-based interceptors, and Prompt Global Strike capabilities as being of particular concern for the Russians.

To address these issues and ensure the viability of the treaty-based, bilateral arms control framework, weapon systems across domains—particularly cyber and space-based capabilities, intermediate range systems, and missile defense—need to be addressed. Work towards multilateralizing strategic arms control frameworks (particularly vis-à-vis China to prevent future free-riding) must also be considered.

A number of informal and formal proposals that might address some of these issues such as a symbolic no-first-use pledge were also discussed. Participants discussed the respective benefits of informal settings provided by Track-2 and Track-1.5 approaches involving subject-matter experts compared to more formal settings ranging from strategic stability dialogues to bilateral arms control negotiations. In the process, participants underlined the importance of integrating lessons learned from past bilateral arms control negotiations as well as considering alternative frameworks, such as asymmetrical arms control agreements, multilateral approaches, and flexible agreements that leverage advances in verification technologies.

Panel 7: Addressing Challenges to European (Nuclear) Stability

- How does the disparity in NSNW capabilities affect overall strategic stability? Does it matter?
- How does and will the INF Treaty violation affect regional nuclear stability?
- Why have the attempts of the U.S. and NATO to seek agreement with Russian on reciprocal reductions and greater transparency failed in the past decade?
- Are there approaches to nuclear arms control in Europe that are in the interests of both Russia and the West?
- What alternative approaches can be considered? And how likely are unilateral Western approaches to generate desired responses by Russia?

Russia's continued violation of the INF Treaty presents one of the most serious threats to European stability today. It was noted that the NATO intervention in the Balkans and the lessons of Russia's ZAPAD 1999 exercise, in which its conventional armed forces failed to repel a mock NATO offensive, motivated the Russian leadership to rethink and ultimately expand the role of nuclear weapons in its strategy and planning. Additionally, Russia's failed attempt to multilateralize the INF treaty finally led Russia to deploy systems in disregard of its treaty obligations.

The challenge posed by Russia's "escalate to de-escalate" strategy and its impact upon U.S. efforts to prevent, through deterrence, first use of nuclear weapons and the practice of limited nuclear war remain at the forefront of European concerns. Participants suggested that Russia's

buildup of non-strategic nuclear warheads has negatively impacted strategic stability in the region and that NATO struggles to respond appropriately. Specifically, they noted that NATO deploys non-strategic nuclear weapons and associated dual-capable aircraft based on political, not military, criteria to ensure that the arsenal remains as large as necessary for credible extended deterrence yet as small as possible for continued political support.

On the question of how the INF Treaty violations affect regional nuclear stability, two scenarios were put forth: (1) The INF Treaty is restored with new requirements surrounding Aegis Ashore to address Russian concerns regarding U.S. missile defense capabilities. In this scenario the low-yield SLBM and SLCM become bargaining chips. (2) Both states continue on their path toward instability that involves a Russian buildup of forces. The participants were broadly pessimistic of solving INF issues, particularly given the challenges associated with establishing broader reductions and failed efforts to enhance transparency.

At the same time, it was concluded that extending New START is a prerequisite to enhancing stability in Europe. A New START II process would be beneficial to the NPT Review Conference in 2020, which offers an opportunity for the United States and Russia to reaffirm their Article VI commitments to the international community. The potential revival of the NATO-Russia Council and the use of joint exercises and war-gaming to build trust between the two sides were discussed

Unilateral steps that could be taken by the United States include mothballing Aegis Ashore, amending the ballistic missile defense posture, changing the force composition in Europe (including dual-capable aircraft), and integrating new technologies, including offensive cyber capabilities, into the deterrence/defense mixture. They also discussed the potential need to "build up to build down," including redeploying ground-launched cruise missiles (GLCMs) in Europe.

Panel 8: The Monty Python Panel ("And now for something completely different")

- What mix-and-match approaches might be feasible?
- What informal mechanisms might be useful?
- Might U.S. and allied interests be adequately served by a new mechanism that makes no reductions but sustains and adapts transparency and verification mechanisms?
- What else should be considered?

This panel was designed to move beyond traditional thinking and consider frameworks that represented "something completely different." It began with a discussion on whether the conditions exist at present for traditional, reciprocal, or treaty-based strategic arms control agreements.

To consider alternative arrangements, panelists went "back to the basics" to examine why states engage in arms control in the first place. Arms control is not a gift; it conforms to the national interest and seeks to provide crisis stability and arms race stability by allowing for transparency and avoiding inadvertent escalation as well as reducing opportunity costs. Panelists also noted

that arms control is "what responsible countries do" as part of their efforts to reduce nuclear risks.

A variety of non-traditional arms control arrangements were considered. For instance, asymmetrical agreements could allow for reciprocal reductions across domains. In non-like-for-like exchanges one party could agree to limits on, for example, non-strategic nuclear weapons in exchange for limits on missile defense from the other party. The use of common ceilings with unequally deep cuts to types of military assets to reach the common ceilings could also provide a framework for a new agreement. Reaching the common ceilings would require differently sized reductions across assets. Ceilings with unequal limits, as implemented in SALT, represent a third asymmetric approach. One possibility is the potential for non-treaty-based restraints on uploading and space-based systems using the Presidential Nuclear Initiatives as a model. Participants also discussed how to address emerging technologies, emerging competitions beyond the U.S.-Russian context, and whether new frameworks ought to consider warheads rather than delivery vehicles.

Outside of the arms control architecture, potential military-to-military and lab-to-lab dialogues, joint studies by academic institutions, efforts to provide non-legally binding risk reduction, confidence-building and transparency measures, multilateral strategic stability dialogues, and the expansion of the 1973 agreement on the prevention of nuclear war were considered.

Despite the variety of possible creative frameworks, participants noted that the prospect of leaders on either side to take advantage of these approaches were slim—given the lack of economic or exogenous shocks that had led both the United States and Russia to support arms control in the past.

This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. LLNL-TR-757262